

## Union County Natural Area Inventory

### MINERAL SPRINGS BARRENS Significant Natural Heritage Area

**Site Significance:** National

**Quadrangle:** Waxhaw

**Size:** 64 acres

**Ownership:** NC Plant Conservation Program,  
Private.

**SIGNIFICANT FEATURES:** Mineral Springs Barrens is one of a small number of remnant "prairie openings" in the state. It harbors significant populations of five rare plant species, including the Federally and State Endangered Schweinitz's sunflower (*Helianthus schweinitzii*), and an unusual community type: Xeric Hardpan Forest. The openings harbor an extremely diverse covering of grasses and wildflowers.

**LANDSCAPE RELATIONSHIPS:** The priority natural areas within the site occur in two areas owned by the NC Plant Conservation Program: 1) between the railroad and Valley Farm Road, a quarter mile east of McNeely Road; and 2) north of the railroad and flanking McNeely Road. A short distance to the southwest is Waxhaw Sunflower Site SNHA, along route 75.

**SITE DESCRIPTION:** 1) Eastern parcel. This parcel lies on a gentle slope with several flat spots. In general the tract is dominated by an oak-hickory-pine community, occurring mostly over hardpan soils. This Xeric Hardpan Forest varies from a closed canopy to moderate-sized openings. Dominant trees are post oak (*Quercus stellata*), blackjack oak (*Quercus marilandica*), southern red oak (*Q. falcata*), and shortleaf pine (*Pinus echinata*), with some persimmon (*Diospyros virginiana*), Biltmore ash (*Fraxinus biltmoreana*), and red cedar (*Juniperus virginiana*) in the understory. The most striking aspect of this parcel is the openings. These are believed to be natural, kept open historically via periodic wildfires and the restrictions placed on tree growth by the hardpan soil. In recent years they have been periodically mowed, and in fall of 2010 were burned. Grasses and wildflowers are abundant, along with populations of four of the five rare plant species on the SNHA, including Carolina birdfoot-trefoil (*Acmispon helleri*), Heller's rabbit-tobacco (*Pseudognaphalium helleri*), nerved witchgrass (*Dichanthelium aciculare* ssp. *neuranthum*), and Schweinitz's sunflower. Burning of the hardpan forest has opened it up considerably, hopefully a boon to the ground layer plants.

Along the south end of the parcel, the land drops off sharply to the railroad, leaving a narrow shelf that is relatively treeless. It formerly was very open, but now is overgrown with tree saplings, shrubs, and coarse grasses, including several invasive alien plants. This strip formerly supported large populations of Schweinitz's sunflower, Georgia aster (*Symphotrichum georgianum*), and Carolina birdfoot-trefoil, but in recent years numbers have diminished greatly.

2) Western parcel. This parcel lies just north of the railroad and flanking McNeely Road (SR 1325). Compared with parcel 1, it is more densely forested and the canopy is mostly closed. The dominant tree in the northern half is shortleaf pine, with a hardwood understory of oaks and hickories. The pines are quite dense and appear to be planted. Japanese honeysuckle (*Lonicera japonica*), an invasive alien, is numerous. The southern half occurs on a hardpan soil and